

CLAIM AMENDMENTS

1. (Currently Amended) A ridge waveguide ~~type~~ semiconductor laser including an optical resonator and comprising:

an active layer;

a semiconductor layer ~~formed~~ on said active layer and having a ridge-shaped waveguide therein;

an ~~insulation~~ insulating film ~~formed~~ on said semiconductor layer;

a first electrode layer in contact with said semiconductor layer through an opening ~~provided~~ in said ~~insulation~~ insulating film; and

a second electrode layer ~~formed~~ on said first electrode layer ~~such that it is shaped like stripes~~ having a stripe shape and runs in a direction of extending generally parallel to said waveguide, wherein a distance from an end face of a ~~the~~ resonator to an edge of said second electrode layer is ~~within~~ less than 20 μm .

2. (Currently Amended) The ridge waveguide ~~type~~ semiconductor laser according to claim 1, further comprising:

an electrode lead-out line extending from said second electrode layer; and

a bonding pad ~~provided~~ on said ~~insulation~~ insulating film ~~such that it extends~~ extending from said electrode lead-out line.

3. (Currently Amended) The ridge waveguide ~~type~~ semiconductor laser according to claim 1, wherein:

said first electrode layer ~~has a structure in which~~ includes a titanium electrode layer and a gold electrode layer ~~are~~ laminated in that order; and

~~a film thickness of~~ said gold electrode layer ~~is~~ has a thickness of at least 700 nm ~~or more~~.

4. (Currently Amended) The ridge waveguide ~~type~~ semiconductor laser according to claim 3, wherein ~~a film thickness of said insulation~~ insulating film is has a thickness not exceeding 250 nm ~~or less~~.

5. (Currently Amended) The ridge waveguide ~~type~~ semiconductor laser according to claim 1, wherein:

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said first electrode layer ~~has a structure in which~~ includes a titanium electrode layer and a gold electrode layer ~~are~~ laminated in that order:

said second electrode layer is a gold-plated layer;

~~a film thickness of~~ said gold electrode layer ~~is~~ has a thickness of at least 200 nm or more; and

~~a film thickness of~~ said gold-plated layer ~~is~~ has a thickness of at least 800 nm or more.

6. (Currently Amended) The ridge waveguide ~~type~~ semiconductor laser according to claim 5, further comprising: a barrier metal layer ~~formed~~ between said titanium electrode layer and said gold electrode layer.

7. (Currently Amended) The ridge waveguide ~~type~~ semiconductor laser according to claim 6, wherein said barrier metal layer is a platinum layer.

8. (Currently Amended) A ridge waveguide ~~type~~ semiconductor laser having an optical resonator including two end faces and comprising:

an active layer;

a semiconductor layer ~~formed~~ on said active layer and having a ridge-shaped waveguide therein;

an ~~insulation~~ insulating film ~~formed~~ on said semiconductor layer;

a first electrode layer in contact with said semiconductor layer through an opening ~~provided~~ in said ~~insulation~~ insulating film; and

a second electrode layer ~~formed~~ on said first electrode layers ~~such that it runs and~~ extending continuously from one end face of ~~a the~~ resonator to the other ~~in a direction of end~~ face along said waveguide, wherein ~~widths of the~~ portions of said second electrode layer near said end faces of said resonator are ~~smaller~~ narrower than ~~that of the other portion~~ portions of said second electrode layer.

9. (Currently Amended) The ridge waveguide ~~type~~ semiconductor laser according to claim 8, further comprising:

an electrode lead-out line extending from said second electrode layer; and

a bonding pad ~~provided~~ on said ~~insulation~~ insulating film ~~such that it extends~~ extending from said electrode lead-out line.

10. (Currently Amended) The ridge waveguide ~~type~~ semiconductor laser according to claim 8, wherein ~~a planar shape of said second electrode layer is made up of~~ has, in plan view, a shape of a first rectangle and two second rectangles provided on respective sides of said the first rectangle, said the second rectangles having a width smaller than that of said the first rectangle.

11. (Currently Amended) The ridge waveguide ~~type~~ semiconductor laser according to claim 8, wherein ~~a planar shape of said second electrode layer~~ has a shape, in plan view, that is tapered such that a width of said second electrode layer is gradually reduced narrows as said second electrode layer approaches said end faces of said resonator.

12. (Currently Amended) A ridge waveguide ~~type~~ semiconductor laser comprising:
an active layer;
a semiconductor layer ~~formed~~ on said active layer and having a ridge-shaped waveguide therein;
an ~~insulation~~ insulating film ~~formed~~ on said semiconductor layer;
a first electrode layer in contact with said semiconductor layer through an opening ~~provided~~ in said ~~insulation~~ insulating film;
an electrode lead-out line extending from said first electrode layer;
a bonding pad ~~provided~~ on said ~~insulation~~ insulating film ~~such that it extends~~ extending from said electrode lead-out line; and
a second electrode layer ~~formed~~ on said bonding pad.

13. (Currently Amended) The ridge waveguide ~~type~~ semiconductor laser according to claim 12, wherein:
said first electrode layer ~~has a structure in which~~ includes a titanium electrode layer and a gold electrode layer ~~are~~ laminated in that order; and
~~a film thickness of said gold electrode layer is~~ has a thickness of at least 700 nm or more.

14. (Currently Amended) The ridge waveguide ~~type~~ semiconductor laser according to claim 13, wherein said second electrode layer is a gold-plated electrode layer.